

IVENS – Appln. No. 10/817,520

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1. (Currently Amended) A purge valve in fluid communication between a fuel vapor collection canister and an intake manifold of an internal combustion engine, the purge valve comprising:

a body defining a fuel vapor flow path between first and second ports, the first port being in fluid communication with the fuel vapor collection canister, and the second port being in fluid communication with the intake manifold;

a seat defining an aperture through which the fluid flow passes in an open configuration of the purge valve;

a head including a permanent magnet, the head being attracted to the seat and occluding the aperture in a closed configuration of the purge valve; and

a solenoid being magnetically coupled to the head, the head being repelled by the solenoid toward the open configuration when the solenoid is energized, and the head occluding the aperture due to the magnetic attraction with the seat when the solenoid is de-energized, wherein movement of the head between the open and closed configurations excludes resilient biasing.

Claim 2. (Original) The purge valve according to claim 1, wherein the solenoid comprises a stator including a passage through which the fuel vapor flow path passes in the open configuration of the purge valve.

Claim 3. (Original) The purge valve according to claim 2, wherein the stator comprises the seat.

Claim 4. (Currently Amended) The purge valve ~~regulator~~ according to claim 3, wherein the stator comprises a tube portion and a disc portion fixed to the tube portion, the tube portion defines the passage, and the disc portion defines the aperture.

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Claim 5. (Currently Amended) The purge valve ~~regulator~~ according to claim 4, wherein the disc portion is integrally formed at a downstream end of the tube portion that is proximate the second port.

Claim 6. (Original) The purge valve according to claim 2, wherein the passage extends along an axis, the first port is concentrically aligned with the axis, and the second port is offset from the axis.

Claim 7. (Original) The purge valve according to claim 1, further comprising:
sonic nozzle defining a portion of the fuel vapor flow path between the aperture and the second port, the sonic nozzle maintaining a substantially constant mass flow in the open configuration regardless of vacuum changes in the intake manifold.

Claims 8-10 (canceled)

Claim 11. (Currently Amended) A method of controlling fuel vapor communication between a fuel vapor collection canister and an intake manifold of an internal combustion engine, the method comprising:

preventing the fuel vapor communication due to a permanent magnet being attracted to a seat, the seat defining an aperture through which fuel vapor passes, and the permanent magnet occluding the aperture;

permitting the fuel vapor communication through the aperture due to an electromagnet repelling the permanent magnet from the seat, wherein resilient biasing of the permanent magnet is excluded.

Claim 12. The method according to claim 11, wherein the permitting comprises the fuel vapor communication biasing the permanent magnet from the seat.

Claim 13 (canceled)